

Oral Health Education

Grade 2

Objectives:

- I. Discuss the importance of mouth and teeth
- II. Understand tooth development
- III. Explain the process of dental decay
- IV. Identify steps to prevent dental decay
- V. Nutrition

Materials for this learning module were compiled from the following sources:

American Dental Association, *Smile Smarts* program

United States Department of Agriculture, *My Pyramid for Kids* program

State of Montana, Department of Public Health & Human Services, Family & Community Health Bureau

Activities are optional and should be used at the discretion of the school/organization.

For additional resources, visit:

<http://www.ada.org/public/education/teachers/ideas.asp#classroom>

<http://teamnutrition.usda.gov/resources/mypyramidclassroom.html>

http://www.pgschoolprograms.com/images/oral_care/oral_prog_pdfs/Crest_TchGd_In.pdf



I. Importance of mouth and teeth

Children need to understand that taking care of their mouth is important because they need to use their mouth and teeth in many ways.

Ask: *Why are your mouth and teeth important?* List responses on board and stress the following:

Eating. With a healthy mouth and teeth, we can eat a wide variety of foods that are good for us. Healthy, strong teeth help us chew our foods well, which aids in digestion.

Speaking. The teeth and the other parts of our mouth are used to make the proper sounds for many letters of the alphabet. They help us speak clearly.

Appearance. The mouth is used when we smile or use other expressions. The teeth help give shape and form to our face. With a healthy mouth, we look good to ourselves and to others.

Activities

1. Game "Catch a Smile" –
Instructions: Have children sit in a circle. The child who is "IT" smiles a big smile (everyone else must be serious). "IT" looks at a certain child, wipes smile off with his/her hand, and throws smile to another child. The child receiving the tossed smile then becomes "IT." The new "IT" repeats this activity. If anyone smiles at "IT" or at the one receiving the smile, he or she is out. The children who are out form a circle outside the ones who are still in the game.
2. Art Activity for Bulletin Board
Give children old magazines. Have them find pictures of people who are eating, talking, or smiling. Allow children to cut or tear the pictures out and glue them to pieces of construction paper. Various colors and shapes of construction paper may be used to reinforce colors and shapes. Use these pictures for a bulletin board.

II. Tooth Development

Ask: Who knows how many teeth are in our mouths? Have students try to count their teeth with their tongues and figure out how many primary teeth they should have. Write their answers on the board.

Ask: Do adults and children have the same number of teeth? Count your own teeth with your tongue and put your answer on the board.

Ask: Why do you think primary (baby) teeth fall out and are replaced with adult teeth?

- A person gets two sets of teeth during their life: baby teeth (or primary teeth) and adult teeth (or permanent teeth).
- Children get 20 baby (primary) teeth.
- We lose our baby teeth to make room for our adult teeth because we need bigger, stronger teeth
- You will have 32 adult (permanent) teeth.
- Your adult teeth are made to last for your whole adult life if you take good care of them.

Activity

1. Have students graph how many students have lost an incisor, a canine, etc. and how many have their permanent teeth in and which permanent teeth have come in.
2. Using the Primary Tooth Development handout, have students color in which teeth they still have (white), which teeth are gone (black), and adult teeth that have come in (light blue). Put up everyone's picture for a comparison.

III. Explain the process of dental decay

Let's talk about cavities and what causes them.

What is a cavity? [A little hole in your tooth.]

A cavity is a small hole in a tooth.

Does anyone know what causes cavities? [You may get a variety of answers, but they may not include plaque.] **Those are all interesting answers, but there is one thing that plays a big part in causing decay, or cavities, in your teeth. It is called "plaque."** [Write "plaque" on chalkboard.] **Has anyone heard that word before?**

What is plaque? *If you do not brush your teeth before you go to bed at night, how does your mouth feel when you wake up in the morning?* [Tastes bad, smells bad, teeth feel sticky or "fuzzy."] **That is because plaque has been forming in your mouth all night.**

Plaque is a sticky, clear film that is constantly forming on your teeth.

Does anyone know how plaque contributes to decay? *Plaque is bad for your teeth because it contains germs. When a person eats or drinks sugary or starchy foods, the sugars and plaque mix together to make an acid.* **Does anyone know what acid does?** [It makes holes in things.] **The acids in your mouth attack your teeth and can make cavities.**

**The sugars and the germs in plaque mix together to make acid.
The acids in your mouth attack your teeth and can make cavities.**

Fluoride

- Fluoride is a mineral that occurs naturally in water sources, including the ocean.
- Brush with fluoridated toothpaste to help protect teeth against decay
- Tooth decay occurs when acid attacks the surface of the tooth. Fluoride can limit the amounts of acid produced in the mouth and help repair any damage before it becomes serious.

Repairing cavities.

What happens when someone gets a cavity? *Does it heal itself like a scrape or cut on your knee?* [No. You have to go to the dentist to get it fixed.] **That's right; only your dentist can fix a cavity, by removing the decay and putting a special filling material in the hole.**

Cavities cannot go away by themselves. They must be fixed by a dentist.

ACTIVITY

How a Cavity Grows. Draw a large tooth on a paper towel with a crayon or permanent marker. Using a black watercolor marker, make a heavy dot on the tooth to represent a cavity. Add a drop of water to the cavity to represent another acid attack. After a few minutes look at the tooth and see how the “cavity” has spread.

Apple Experiment. Follow directions on Apple Experiment worksheet.

Remind students that fluoride can limit the amount of acid produced in the mouth and stop the cavity from happening or spreading

IV Steps to prevent dental decay

- Brush your teeth twice a day with fluoride toothpaste.
- Use the correct size toothbrush
- Replace toothbrush when needed
- Eat a balanced diet and limit between-meal snacks.
- Visit your dentist regularly for professional cleanings and oral exams.

Activities

1. Show tubes of toothpaste and have students identify which toothpastes have fluoride and which don't.
2. Display different size toothbrushes and have students identify which are the correct size for their age
3. Have students plan a whole day's menu with foods that are good for their bodies and teeth

Introduce plan to track brushing with ADA Oral Care Calendar (use worksheet) and create an incentive for completing the calendar.

V. Good nutrition.

There is another way we can help keep our teeth clean and healthy. That is by eating and drinking healthy foods. The foods we eat are just as important for keeping our teeth healthy as they are for keeping our bodies healthy. Eating a mix of healthy foods for breakfast, lunch and dinner is the best way to keep your teeth and whole body in good shape. If you are hungry and need a snack, choose foods like fruit, low-fat cheese, low-fat yogurt, or raw vegetables. If you are thirsty, have a glass of water or low-fat milk. Don't drink too much sugary soda or eat too many sweets. If you have some sweets, try to eat them with your meals.

Prevention

Plaque and Decay

Plaque—a nearly colorless film on teeth, contains acid-producing bacteria that cause decay.

- Each time we eat foods with sugar or starch, these bacteria produce acids that attack tooth enamel for at least 20 minutes.

Decay—after repeated attacks, a hole (or cavity) can form through dissolved enamel. You can help prevent decay and cavities through:

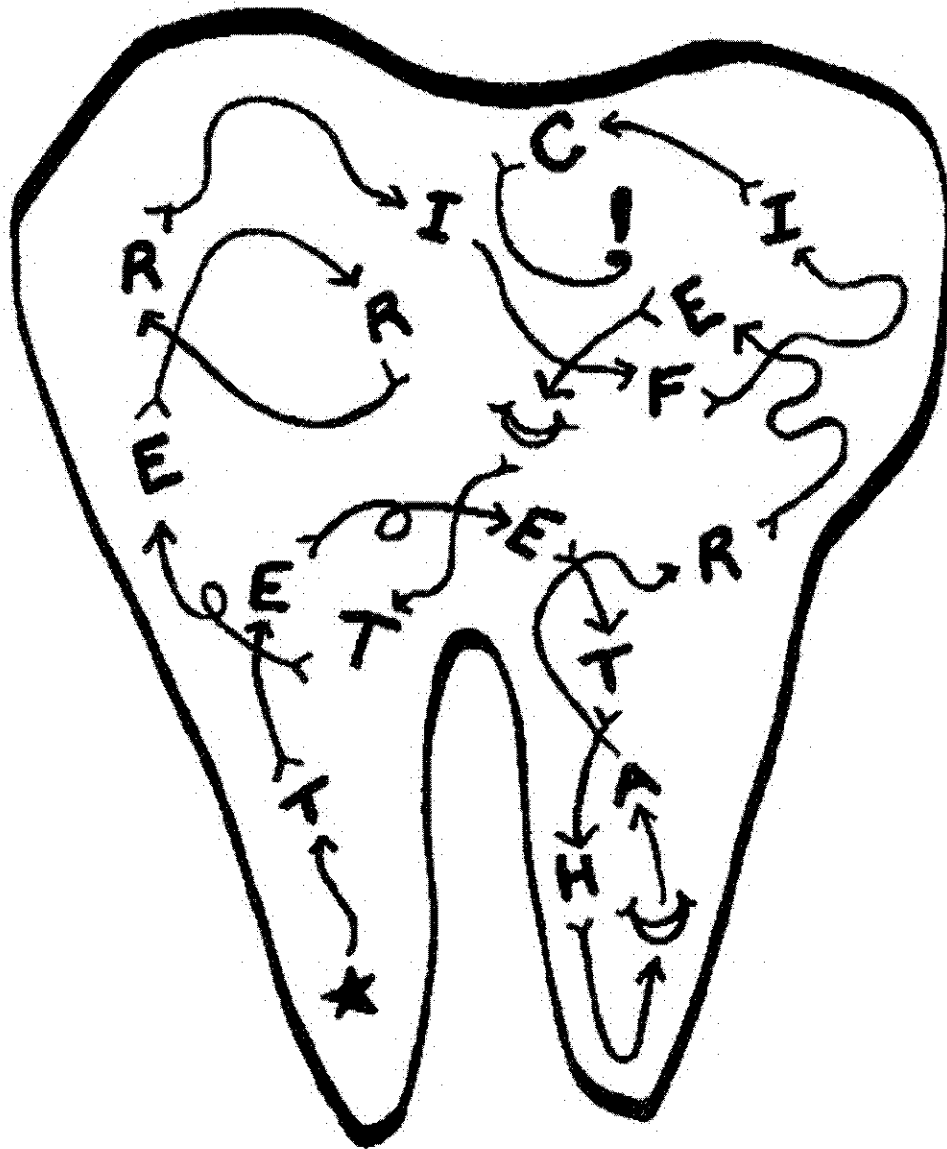
- Daily brushing, flossing and rinsing
- Healthy eating
- Regular dental checkups

A-MAZE-ing Message

There is a message hidden in the tooth. Start at the star and follow the arrows.

Write down the letters on the spaces below as you come to them.

A smile means the end of a word. The next letter starts a new word.





Tooth Decay experiment using apples

Learning Objective: demonstrate how tooth decay is the result of a process that begins on the enamel of the teeth.

Materials needed:

Apples—may use 2 apples (1 control and 1 experimental) for the entire classroom or have 1 control for the class and several experimental apples (1 per small group of children)

Paper bags

Sharpened pencils

Inquiry/Problem: Ask students if anyone has had a cavity in a tooth. Ask students to describe what a cavity is and how it happens. Ask them to explain what they know about the enamel on their teeth and how it relates to cavities. Record the students' responses on the board.

Show students an apple. Ask the students to draw comparisons between the apple and a tooth. (apple skin like enamel, shaped like a molar, etc.) Explain to students that even though the apple is not exactly like a tooth, it can serve as a model for a tooth. Point out the similarities between the skin of the apple and the enamel on their teeth. Both serve to protect what is inside the tooth (dentin) and the apple.

Hypothesis: Ask students what they think might happen if someone used a pencil to poke holes in an apple? Have students predict what they think will happen to the apples if they poke holes in the skin. Write their predictions on a large sheet of paper.

Procedures: Using their pencils, have students carefully poke holes in their apples and then place the apples in their paper bag with the name of their group written on it. Place the control apple in a bag and write "control" on the bag. Explain the role of having a "control" in an experiment. Point out that the control makes the experiment a fair test of what will happen.

Results: In a couple of days, have groups come to the front of the class and bring their apples. The teacher (not the students) will cut into the apples so they can see what happened. After all the experimental apples are cut, the teacher will cut into the control apple.




Copyright © 2000 by BSCS and Videodiscovery, Inc. All rights reserved.


Conclusion: Bring out sheet of paper with predictions. Have students compare the appearance of the apples to their predictions.

Just like the pencil penetrated the peel and caused the fruit to rot, bacteria can penetrate a tooth's enamel to cause decay.

Missing Teeth Graph

12						
11						
10						
9						
8						
7						
6						
5						
4						
3						
2						
1						
0						
	Central Incisor	Lateral Incisor	Other	Central Incisor	Lateral Incisor	Other
	Top	Top	Top	Bottom	Bottom	Bottom

Color/Brand of Toothbrush & Toothpaste Graph

12								
11								
10								
9								
8								
7								
6								
5								
4								
3								
2								
1								
0								
	Electric	Regular	Color	Color	Color	Brand or color	Brand or color	Brand or color
	Toothbrush	Toothbrush	Toothbrush	Toothbrush	Toothbrush	Toothpaste	Toothpaste	Toothpaste

Adult and Child-Size Toothbrushes

Which one would be easiest for him to use?



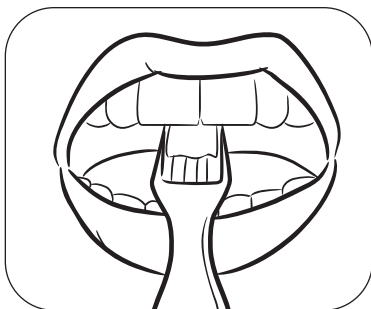
How to Brush



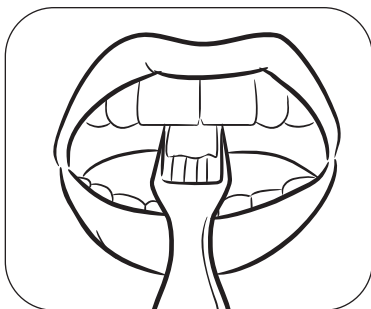
- Place the toothbrush at a 45-degree angle to the gums.



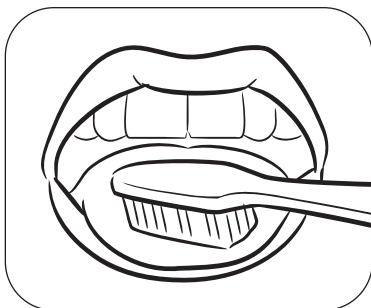
- Move the brush back and forth gently in short strokes.



- Brush the outer surfaces, the inside surfaces and the chewing surfaces of all teeth.

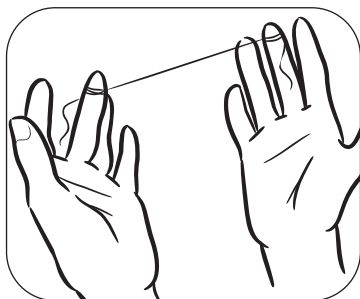


- To clean the inside surface of the front teeth, tilt the brush vertically and make several up-and-down strokes.

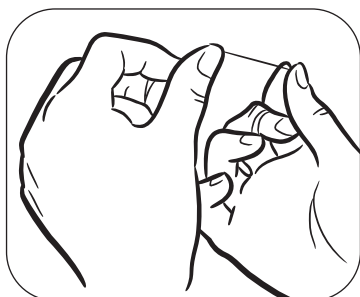


- Brush your tongue to remove bacteria and keep your breath fresh.

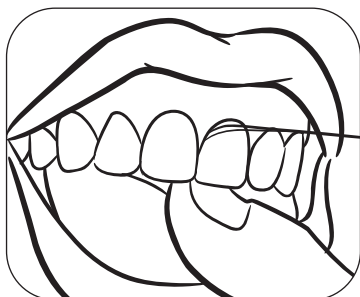
How to Floss



- Use about 18 inches of floss wound around one of your middle fingers, with the rest wound around the opposite middle finger.



- Hold the floss tightly between the thumbs and forefingers and gently insert it between the teeth.



- Curve the floss into a "C" shape against the side of the tooth.



- Rub the floss gently up and down, keeping it pressed against the tooth. Don't jerk or snap the floss.



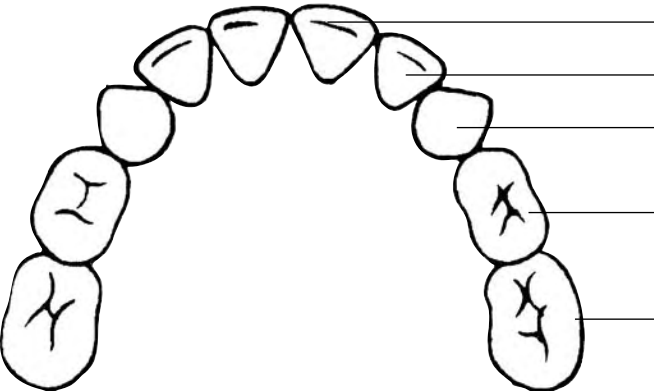
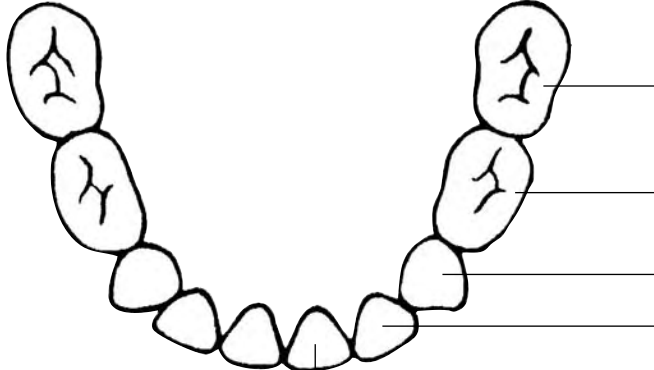
- Floss all your teeth. Don't forget to floss behind your back teeth.



ADA[®]

© 2005 American Dental Association. All rights reserved. Educators and dental professionals are permitted to reproduce and use this activity sheet solely in printed form. Any other use, duplication or distribution of this activity sheet by any other party requires the prior written approval of the American Dental Association.

Primary Tooth Development

Upper Teeth		Erupt	Shed
	Central incisor	8-12 mos.	6-7 yrs.
	Lateral incisor	9-13 mos.	7-8 yrs.
	Canine (cuspid)	16-22 mos.	10-12 yrs.
	First molar	13-19 mos.	9-11 yrs.
	Second molar	25-33 mos.	10-12 yrs.
Lower Teeth		Erupt	Shed
	Second molar	23-31 mos.	10-12 yrs.
	First molar	14-18 mos.	9-11 yrs.
	Canine (cuspid)	17-23 mos.	9-12 yrs.
	Lateral incisor	10-16 mos.	7-8 yrs.
	Central incisor	6-10 mos.	6-7 yrs.

NUTRITION



A Close Look at MyPyramid

For Kids

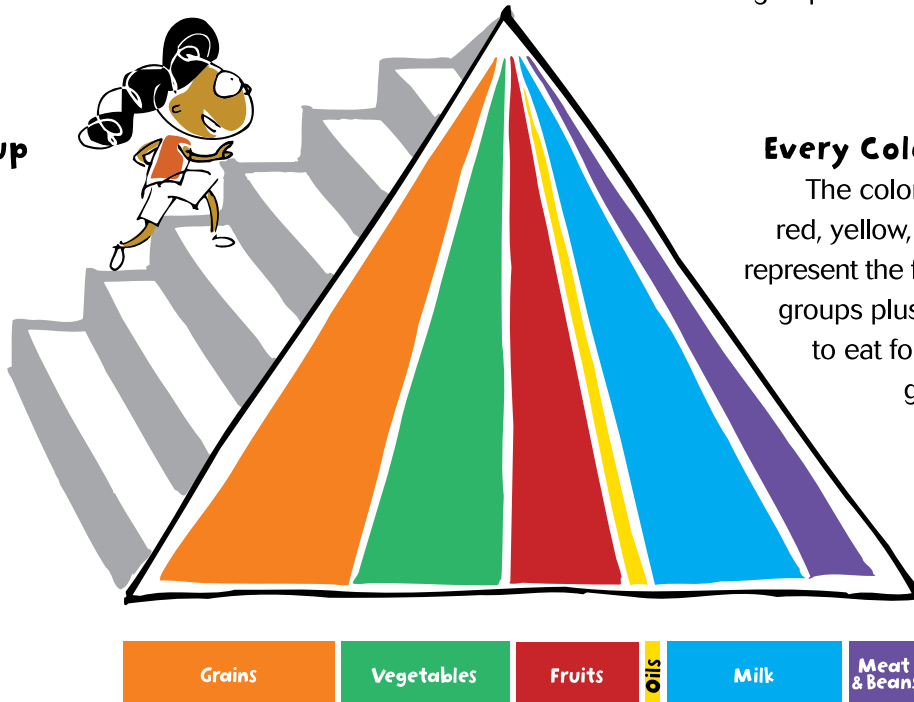
MyPyramid for Kids reminds you to be physically active every day, or most days, and to make healthy food choices. Every part of the new symbol has a message for you. Can you figure it out?

Be Physically Active Every Day

The person climbing the stairs reminds you to do something active every day, like running, walking the dog, playing, swimming, biking, or climbing lots of stairs.

Choose Healthier Foods From Each Group

Why are the colored stripes wider at the bottom of the pyramid? Every food group has foods that you should eat more often than others; these foods are at the bottom of the pyramid.



Eat More From Some Food Groups Than Others

Did you notice that some of the color stripes are wider than others? The different sizes remind you to choose more foods from the food groups with the widest stripes.

Every Color Every Day

The colors orange, green, red, yellow, blue, and purple represent the five different food groups plus oils. Remember to eat foods from all food groups every day.

Make Choices That Are Right for You

MyPyramid.gov is a Web site that will give everyone in the family personal ideas on how to eat better and exercise more.

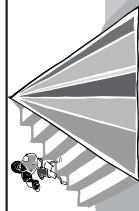
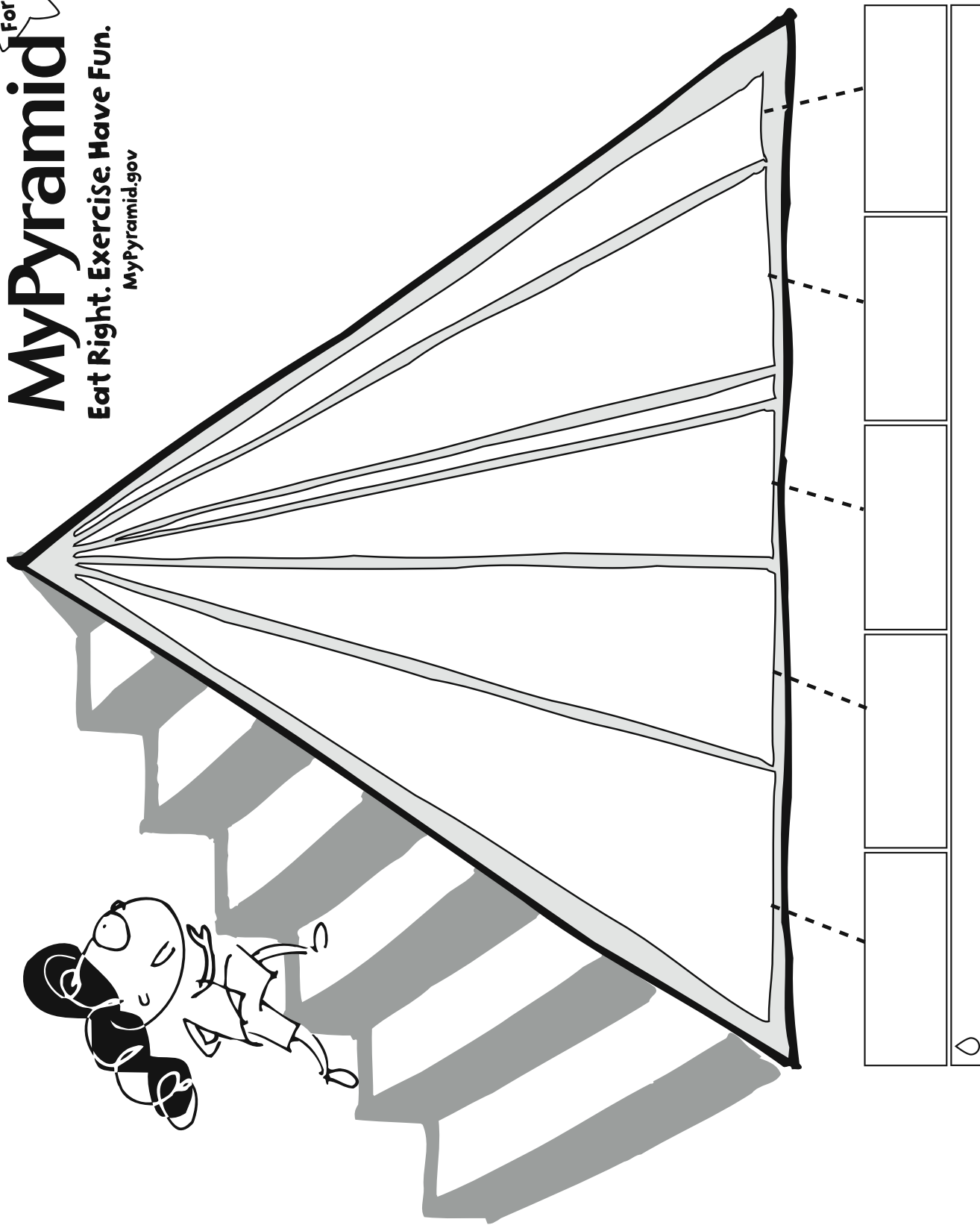
Take One Step at a Time

You do not need to change overnight what you eat and how you exercise. Just start with one new, good thing, and add a new one every day.



Eat Right. Exercise. Have Fun.

MyPyramid.gov





Lesson 2:

Eat Smart with *MyPyramid for Kids*

Lesson Highlights

Objective

Students will:

- Practice sorting foods into the appropriate food groups.
- Learn where to find foods from each food group in the lunch line.
- Learn to look for foods from each food group when they visit the supermarket.

Curriculum Connections:

Math, Science, Health,
Language arts

Student Skills Developed:

- Reading and following directions
- Thinking skills – categorizing

Materials:

- Eat Smart with *MyPyramid for Kids* worksheet for each student
- Food illustrations from CD ROM
- Food label and ingredients list for a whole-grain food (cereal box, bread wrapper, etc.)
- *Dear Parents – Grocery Store Treasure Hunt* reproducible for each student

Activity: Eat Smart with *MyPyramid for Kids*

1. Tell students that they are going to learn about many examples of foods from each of the food groups shown on *MyPyramid for Kids*. Hand out a copy of *Eat Smart with MyPyramid for Kids* to each student.

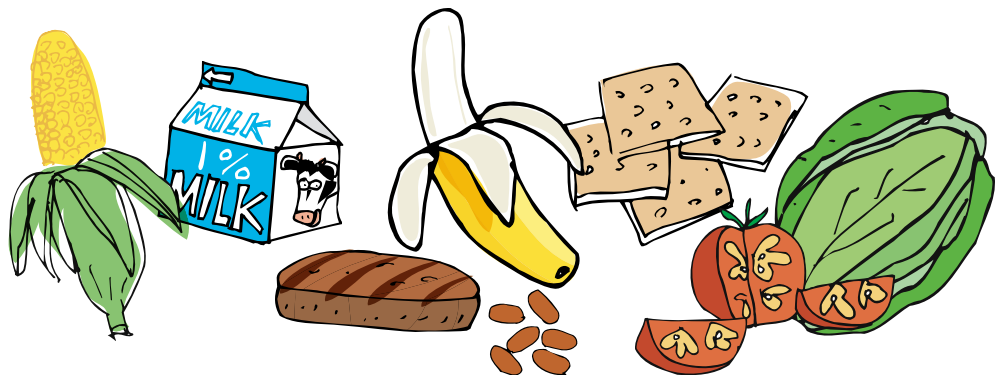
2. Have students complete the worksheet.

3. Review the worksheets with the students and talk to them about each food group. Some points to cover are:

- **Grains** – Point out foods students might not think of as grains – oatmeal, corn meal, or rice and popcorn.

Tell students that some grains are whole grains. At least half the grains they eat should be whole grain. Some names for whole grains are whole wheat, whole-grain corn, and oatmeal. Show them the words “whole grain” on the ingredients label or the front of a cereal box and ask them to look for it on a cereal box at home.

- **Vegetables** – Do your students eat fresh vegetables? Frozen? Canned? Dark green and orange vegetables are especially important. (Examples include spinach, broccoli, carrots, and sweet potatoes.) Ask students to name dark green and orange vegetables they’d like to try.
- **Fruits** – Explain that fruit can be fresh, canned, frozen, or dried. Ask children about their favorite fruits. What type or form do they eat?
- **Milk** – Ask students to name some foods in the milk group (milk, cheese, yogurt, ice cream). Where does milk come from? Do they drink milk every day? For children who are lactose intolerant, there are lactose-free products.
- **Meat and Beans** – Ask students to name foods from the meat and beans group (meat, fish, chicken, turkey, eggs, dry beans, and peas, nuts, and seeds). Do they ever eat beans at home for dinner?



Group Activity: Play Pyramid Go Fish

Students play Pyramid Go Fish with food cards. This activity will give students additional practice in sorting foods into groups.

Getting Started:

- **Duplicate food illustrations from CD ROM and cut into cards.**
- **Put students into groups of four and distribute 30 cards to each group.**
- **Now play Pyramid Go Fish.** The dealer deals out four cards to each student, and places the rest in the middle. The first student (let's call him Michael) asks the student sitting to his left, "Kayla, do you have a fruit?" If Kayla has a fruit she says, "Yes, I do," and hands her card to Michael, who then places his pair of cards on the table. Michael is then able to ask the next student a question.
- **If Kayla doesn't have a fruit, she replies, "No I don't have a fruit. Go fish,"** and Michael can take a card from the pile in the middle. It is then Kayla's turn to ask the student on her left for a card. The students continue to ask questions and find cards until all the pairs are found. The student with the most pairs wins.



Lunchroom Link:

Plan a visit to the cafeteria. Ask the staff to show students where to find foods from each food group on the serving line. (Perhaps the foodservice staff could put the appropriate color dot sticker by the food on the serving line, i.e., green = vegetable, red = fruit, etc.)



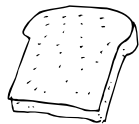
Home Connection:

Send the *Dear Parents Grocery Store Treasure Hunt* letter home with your students. This is a nutrition activity they can do with their families.

Name: _____

Eat Smart with *MyPyramid for Kids*

Draw a **circle** around the foods that are in the **Grain Group**.



Slice of bread



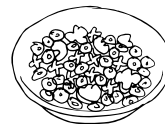
Baked potato



Popcorn



Pasta (bowtie)

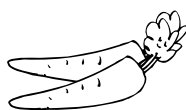


Cereal



Candy bar

Draw a **rectangle** around the foods that are in the **Vegetable Group**.



Carrots



Spinach



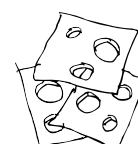
Grapes



Pasta (macaroni)



Broccoli



Swiss cheese

Draw a **square** around the foods that are in the **Fruit Group**.



Corn



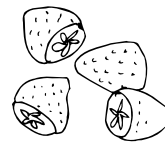
Orange juice



Apple



Banana



Strawberries



Muffin

Draw a **triangle** around the foods that are in the **Milk Group**.



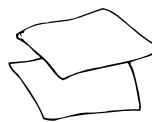
1% Milk



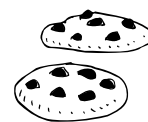
Yogurt



Egg



American cheese



Cookies



Orange juice

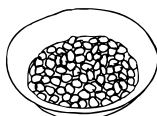
Draw an **oval** around the foods that are in the **Meat and Beans Group**.



Peanut butter



Egg



Beans



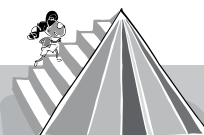
Chicken



Pork chop

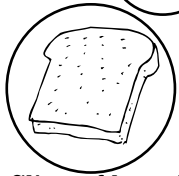


Fish



Eat Smart with *MyPyramid for Kids*

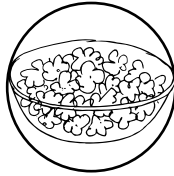
Draw a **circle** around the foods that are in the **Grain Group**.



Slice of bread



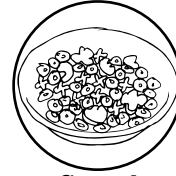
Baked potato



Popcorn



Pasta (bowtie)

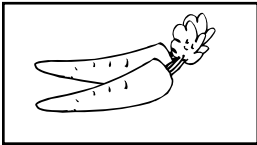


Cereal



Candy bar

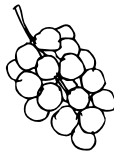
Draw a **rectangle** around the foods that are in the **Vegetable Group**.



Carrots



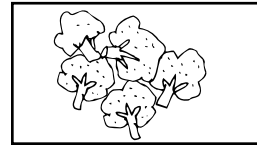
Spinach



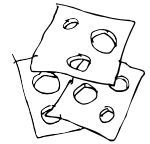
Grapes



Pasta (macaroni)



Broccoli

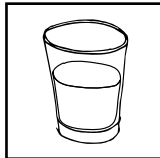


Swiss cheese

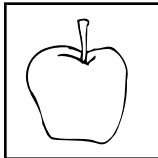
Draw a **square** around the foods that are in the **Fruit Group**.



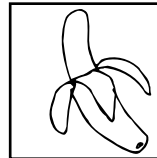
Corn



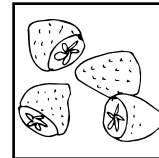
Orange juice



Apple



Banana

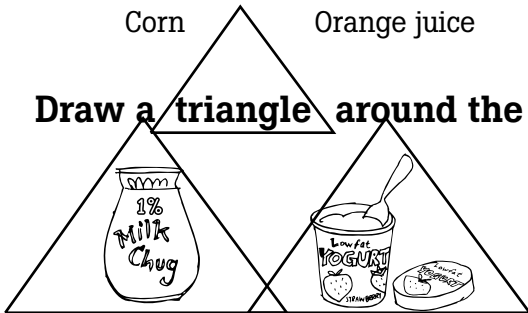


Strawberries



Muffin

Draw a **triangle** around the foods that are in the **Milk Group**.



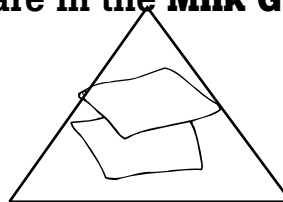
1% Milk



Yogurt



Egg



American cheese



Cookies

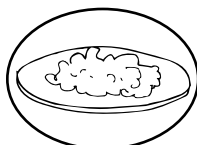


Orange juice

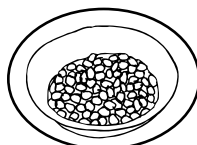
Draw an **oval** around the foods that are in the **Meat and Beans Group**.



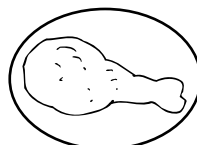
Peanut butter



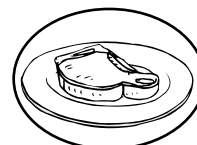
Egg



Beans



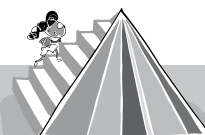
Chicken



Pork chop



Fish



Grocery Store Treasure Hunt

Grains

Most people need to eat more whole-grain foods. Breakfast cereals are an easy way to add whole grains to your diet. Look for some cereals that have one of these words as the first ingredient: oatmeal, whole-grain corn, whole oats, whole wheat.

The color of the bread does not mean it is whole-grain. Bread can be brown because of molasses or other added ingredients. Read the label to see if it's made with a whole grain. Foods labeled with the words "multi-grain," "stone-ground," "100% wheat," "cracked wheat," "seven-grain," or "bran" are usually **not** whole-grain products.

Dear Parents:

We have been learning about nutrition and *MyPyramid for Kids* in our class. You can help your child learn more about the foods your family enjoys. Take this sheet along with you the next time you go to the supermarket and have your child look for foods in each food group. If you have access to the Internet, you can learn more about *MyPyramid* at **MyPyramid.gov**.

Make this a fun treasure hunt and a memorable activity for your child.

Signed,

Your Child's Teacher

Vegetables

Look for some dark green or orange vegetables such as broccoli, spinach, romaine lettuce, carrots, sweet potatoes, and pumpkin. Most kids (and adults) don't get enough of these.

Milk

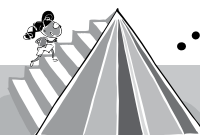
Kids need the calcium from milk and milk products every day to build strong bones. Help your child choose a calcium-rich food to eat for a snack such as fat-free yogurt, lowfat cheese and cottage cheese, or 1% or fat-free milk.

Fruits

Choose one fruit you've never tried but would like to try. When buying fruit drinks, find one that is 100% fruit juice. It's a good idea to offer your child whole fruits more often than 100% fruit juice.

Meat and Beans

Look at all the kinds of foods in the meat and beans group. Then find some different types of dry beans. These are good sources of protein.





Lesson 3:

Vary Your Veggies and Focus on Fruits

Lesson Highlights

Objective

Students will:

- Identify fruits and vegetables in their diet.
- Learn to graph the number of fruits and vegetables they eat.

Curriculum Connections:

Math, Science, Health, Language arts

Student Skills Developed:

- Graphing
- Recording data in a chart
- Making predictions

Materials:

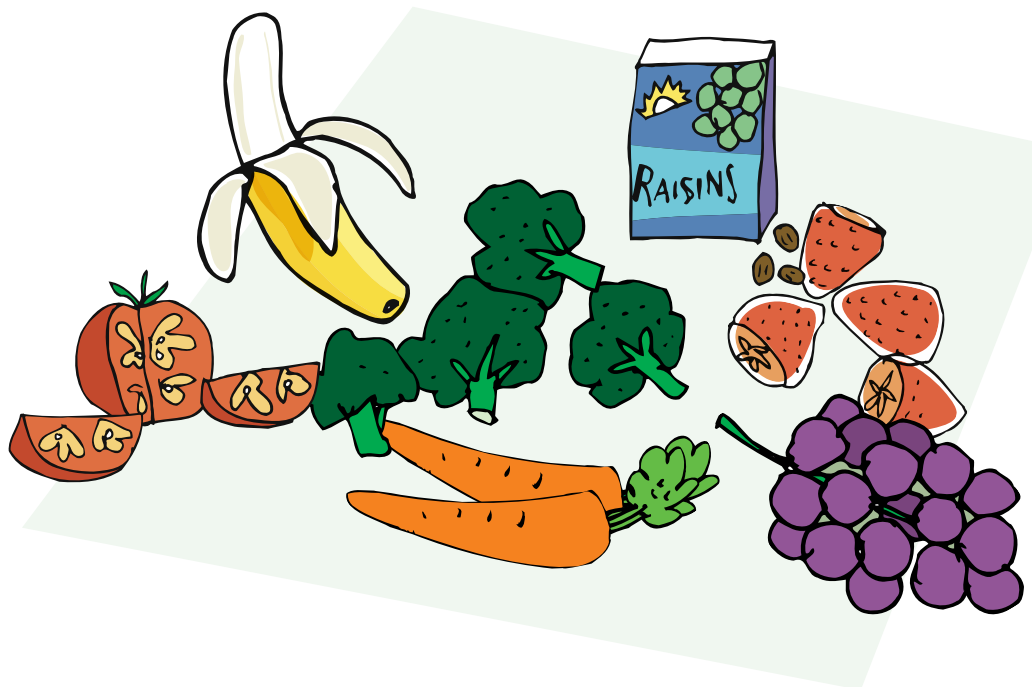
- *My Fruit and Vegetable Diary* reproducible for each student
- Holepunch
- Scissors for each student
- Yarn or string
- *Fruit and Vegetable Challenge Kit*

Getting Started:

Challenge students to name as many fruits and vegetables as they can in 1 minute. Write these on the board by food group.

Activity: Fruit and Veggie Diary

1. Point out that fruits and vegetables are foods children need to grow and be healthy.
2. Ask children to look at the list they just developed. Are there any fruits or vegetables they have never tried? Introduce additional foods they may not have identified.
3. Distribute the *My Fruit and Vegetable Diary* reproducible to each student. Have students cut out the pages and put them in the correct order. Punch a hole through the upper-left-hand corner and have children tie the diary with yarn or string. Every day for a week have students write (or draw a picture of) all the fruits and vegetables they ate that day.
4. At the end of the week, ask students to name the foods they ate. Talk about the variety of fruits and vegetables.



Group Activity: Graph It

You can turn the information from the Fruit and Vegetable Diaries into a graphing activity. Ask students to total the number of fruits and vegetables the class ate the day before. Help the class present this information in the form of a graph for your classroom wall. (You might use green squares to represent vegetables and red squares to represent fruits, just like the stripes on *MyPyramid for Kids*.) Each day, they can graph the class totals or their personal totals. (Add an individual graph option. Talk about how children can increase the number of fruits and vegetables on their graph.)



Lunchroom Link:

Have students identify the fruits and vegetables they ate for lunch today. Include those who ate the school lunch and those who brought a lunch from home. Work with the Cafeteria Manager to introduce new foods to students. Use the enclosed *Fruit and Vegetable Challenge Kit*; follow the instructions in the folder.



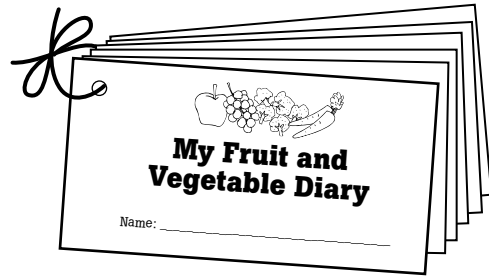
Home Connection:

Have students share their fruit and vegetable diary with their parents.

Name: _____

Make a Fruit and Vegetable Diary

1. Cut out the pages on the dotted lines.
2. Put them in the correct order.
3. Have your teacher make a hole through the circle.
4. Tie the pages together.
5. Draw or write the fruits and vegetables you eat.
6. How many fruits and vegetables did you eat each day?



My Fruit and Vegetable Diary

Name: _____

MONDAY

Fruits

Vegetables

TUESDAY

Fruits

Vegetables

WEDNESDAY

Fruits

Vegetables

THURSDAY

Fruits

Vegetables

FRIDAY

Fruits

Vegetables

